



NEWSLETTER NUMBER 38 - SPRING 2014

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EDITORIAL

May I wish all our readers a happy, healthy and comfortable 2014. For a happy time why not come to the Summer Barbecue in June? See the Programme below.

Traditionally the advent of the new year is the time for resolutions so perhaps it's not too late to make one to pay the Association subscriptions promptly! There are still many unpaid subs. for 2013, as detailed in the last Newsletter. (cheques payable to The Hawker Association). With this one you will find, **as usual**, the **subscription renewal form** for 2014 together with the calling notice for the Annual General Meeting. The Chairman would welcome new Committee Members to help run the Association so please think about putting yourself forward. Long serving Member Les Palmer will be retiring at the AGM and we thank him for his valuable contributions to the Association.

The Editor would welcome articles from Members about their time at 'Hawkers'. Please send them, preferably by e-mail but handwritten pieces by post are fine, to The Editor, Chris Farara, 24 Guildown Road, Guildford, Surrey, GU2 4EN, tel 01483 825955, e-mail cjfarara@ntlworld.com.

PROGRAMME FOR 2014

Wednesday 12th February

Wednesday 12th March

Wednesday 9th April

Wednesday 14th May

Wednesday 11th June

Wednesday 9th July

Circuit of Britain 1913 & 2013 - **Jeff Boyling**.

Fifty Years of Flying - **Bernie Scott**.

11th **Annual General Meeting**.

The HSA Advanced Projects Group - **Prof John Allan**.

Summer Barbecue at the Hawker Centre.

Paper Aeroplanes - **Ed Hui**.

Bernie Scott was a Dunsfold TP after an RAF career and **John Allan** was Head of Future Projects after moving from the HSA APG. **Ed Hui** will talk about and demonstrate his remarkable paper gliders.

To book for the Summer Barbecue please contact Ken Batstone on 01932 229938. The price had not been agreed at the time of writing but it will be similar to last year.

Unless stated otherwise, meetings are at the Hawker Centre, Kingston - the old Sports & Social Club - and start at 2.00 pm. Lunch and drinks are available beforehand, tea afterwards, and there is a large, free car park.

CHRISTMAS LUNCH

Ken Batstone reports

On Wednesday, December 11th 2013, the annual Association Christmas Lunch was held in the YMCA Hawker Centre, the usual venue. It was attended by 63 members and guests, a significant increase on recent years' numbers, well up with those attending prior to 2008 when numbers started to drop. This had been worrying to the Committee which had been wondering what was going wrong, since attendance at the Summer BBQ was also dropping. However, both events have attracted increasing numbers since 2012. The price of the Lunch for 2013 rose, for the first time in four years, by 50p to £16.50 which the Committee considered still very good value, particularly in the current financial situation.

With the large number of attendees, we were somewhat cramped in the cafeteria area of the Hawker Centre, so the Committee will try to ensure that we are seated next Christmas in the "Studio", the much larger room next door which we used before the changes in the layout of the Centre. However, apart from slightly slowing the arrival of the courses due to the closeness of the tables, this did not affect the enjoyment of the meal, the speeches and the general convivial surroundings. The lunch consisted of a glass of wine and the traditional three courses of soup, roast turkey with trimmings and Christmas pudding, followed by coffee and mince pies. There were alternative starters and main courses, including a vegetarian option, but their availability was a little unclear.

Lunch was preceded by Grace, given by the Reverend Vernon Lidstone, and followed by short speeches from the Chairman, Ambrose Barber and our President, Sir Colin Chandler. It was noted that five ex-directors of the company and three people over the age of ninety were present! It was generally agreed that the enjoyable food was up to the usual high standard.

After the meal our appreciation and thanks were expressed to the YMCA staff both verbally and more tangibly. The YMCA was also thanked for its generous contribution of two bottles of wine for raffle prizes.

REQUEST FOR HELP.

Nick Stroud wonders if any Members either have knowledge of the design of the DH/HS Trident or know someone who might, for an article he is preparing for The Aviation Historian. Please contact him on 07572 237737 or at nickstroud@theaviationhistorian.com.

KINGSTON AVIATION CENTENARY PROJECT MILESTONE

David Hassard writes

The Kingston Aviation Centenary Project completed its first phase with the acceptance of its final evaluation report by the Heritage Lottery Fund at the end of 2013. This closes the two year financial support by the Heritage Lottery fund which has enabled the team to build a portable exhibition, build a website and establish an oral history programme whilst reaching out to the local community

Since January 2012 the project team has organised the Kingston Aviation Festival in Kingston Market Place, a "Kingston Aircraft" art exhibition in Kingston Museum, five exhibitions in local libraries and one in Canbury Park Road as well as exhibiting at other events. 2,800 people, including 600 children, have attended illustrated talks on Kingston's aviation history in schools, pubs, clubs, societies and local organisations of all kinds. The most popular talk is "Bat Boat to Red Arrows – 100 years of world class aircraft from Kingston". There is also "The Great Aircraft Factory, Ham", "The Sopwith Story", "The Hurricane Story", and for young children "Tom, Fred and Harry build aeroplanes in Kingston". You can contact the project if you know of a group who would enjoy one of these talks or if you would like to present a talk using one of these slideshows.

The website (www.kingstonaviation.org) continues to expand in content. The "Hawker people" photo archive on the website is increasingly interesting as more images are annotated with individual's names which pop up when you hover the cursor over a face. If you have interesting group photos, especially ones taken in the workplace, the project would be keen to receive scanned copies. Also on the website are extracts from the first twelve oral history interviews which include people like Gordon Jefferson and Mike Frain. Twenty four interviews have been completed. There is a significant list of further interviews to organise and the project is always looking for volunteer help with transcribing the recordings.

A more recent innovation is the "100 years ago this week" newsletters which are re-living the growth of The Sopwith Aviation Company at the pace it happened. You can find back issues summarised on the website under the "100 years ago" tab where you can also sign up to get future newsletters by e-mail.

Over the last two years the project has been receiving donations of archive material and memorabilia all of which in turn is donated to the Hawker technical archive at the Brooklands Museum, run by Hawker Association member Chris Farara. A considerable amount of duplicate archive material and a digital archive are also being donated to the Kingston Local History Centre.

The project will be assisting Kingston Museum with the aviation element of their First World War Exhibition in May this year whilst continuing into the foreseeable future with talks, newsletters, recording oral histories and populating the website. The team is keeping the project running with the help of donations from outreach talks and advertising revenue from the website. (If you buy from Amazon, going to the Amazon website from their link in the bottom right hand corner of the project website brings in a payment from Amazon.)

The project team would like to record their appreciation for the invaluable support received from the Hawker Association and many of its members. Without the Hawker Association agreeing to sponsor the initial Heritage Lottery Fund application and helping establish a project bank account there would be no Kingston Aviation Centenary project. The tremendous support from everybody else contacted has been equally invaluable. Special thanks must go to BAE Systems, the Brooklands Museum and the Royal Borough of Kingston Council.

You can get in touch with the project via the website www.kingstonaviation.org or by direct contact with the Joint Project Leaders: David Hassard hassards@talktalk.net 020 8546 2715 (Outreach talks, Education, Newsletters, Exhibitions) and Bill Downey billdowney@sky.com 020 8949 5498 (Oral history, Website, Photo archive).

HARRY HAWKER'S DAUGHTER DIES

David Hassard writes...

Mary Steele, younger daughter of Harry George and Muriel Hawker died on December 24th, 2013, aged 93. She was named after the Danish ship Mary that had picked up her father and his navigator, Mackenzie Grieve, from mid-Atlantic at the end of their Transatlantic attempt in May 1919. Mary joined the Royal Air Force in 1941, working at Medmenham for the Photographic Interpretation (PI) Branch. Her duties included model making. One was of Altafjord in Northern Norway where the German battleship Tirpitz was docked, posing a major threat to the Arctic Convoys. The model played a vital role in the bombing raid that led to the disabling of the battleship on the 15th September 1944. The surrounding area was so finely detailed that when shown to a group of Norwegians who were from that part of Norway they assumed Mary had been there herself. After the war she became a medical artist and, in 1949, a founder member of The Medical Artists' Association of Great Britain.

In 1950 she married Nigel Steele (D 1998), settling in Lindfield where she lived for the rest of her life. Mary is survived by her three daughters, Anna, Jenny and Cathy and seven grandchildren.

AIRCRAFT NEWS

SOPWITH SNIPE - A Bentley BR.2 powered Snipe reproduction, built by The Vintage Aviator Ltd (TVAL) of Wellington, New Zealand is now flying. It is the third Snipe that TVAL has built.

SOPWITH TABLOID - The Kingston Aviation Heritage Trust's non-flying near-replica has been presented to the Brooklands Museum.

GNAT TMk1 - XS102 made its first post-overhaul flight at North Weald in December 2013. It had not flown for six years. Painted to represent XR992, the lead aircraft of the RAF Yellowjacks aerobatic team, it has joined two other Gnats in the Heritage Aircraft Trust's (HAT) Gnat Display Team.

GNAT FMk1 - The HAT has acquired in the USA a Folland-built former Indian Air Force Gnat FMk1 which it plans to restore to flying condition.

A LUCKY AVIATOR

This was the title of Heinz Frick's talk to the Association on November 13th 2012. Members will remember Heinz as a Dunsfold test pilot and Chief Test Pilot, succeeding Mike Snelling in this post. Chris Roberts took over from Heinz.

Heinz was born in Switzerland in 1940. Sadly his parents divorced after which he lived with his grandmother for 4-5 years during which she introduced him to beer and took care of him. In 1952 his mother married an Englishman and Heinz moved to London where he completed his education and, always having been interested in aviation and the RAF, he joined up in 1959.

His primary training was on the second Jet Provost TMk3 course. His considerate instructor put up with Heinz's proclivity for air sickness and he soloed in 10 hours. At the age of 21 after 110 hours on Vampire TMk1 1s, and a lot of hinting to his Wing Commander, (and getting married) he got posted to 20 Sqn flying Hunter FGAMk9s in Singapore. The squadron was very busy and moved to north Thailand to 'show the flag' against a threat of a Chinese invasion. The USAF was there too, with F-105s, F-100s and F-101s so exercises were arranged where the "brilliant" Hunters and the USAF defended and attacked a feature alternately. The Hunters flew just above the weeds and the USAF dived from 40,000 ft so they never met. Eventually it was decided that all should fly below 10,000 ft but sadly one USAF pilot was killed so the events were called off. The squadron accommodation was all tented which in the Monsoon was very uncomfortable. An air show was mounted for the locals, 90% of whom had never seen an aircraft or a pilot and wanted to touch them. "The world's worst fighter", the Javelin, and Canberras also took part.

When Sukharno threatened Malaysia the squadron moved from Singapore to Borneo and were up against Badgers, MiG 15s and 17s and Mustangs. There were no maps so Heinz's artistry was called upon to mark the blank charts with the frontier, mountains and so on. The MoD had failed to provide adequate covers for the Hunters which were parked outside in the tropical rain leading to a number of accidents. Heinz was air testing a Hunter that had suffered from asymmetric flap deployment, when, on lowering full flap at 10,000 ft the aircraft entered a spin. Not having recovered by 5,000ft Heinz ejected, and was subjected to the 22g acceleration of the Mk2 Martin Baker seat resulting in two crushed vertebrae and a period in hospital. The Straits Times reported that flying officer Frick had saved himself by "ejaculating into a swamp".

Next it was back to the UK and Lightnings at the Coltishall OCU (Operational Conversion Unit). Slightly awed by the aircraft Heinz had three dual trips then "never looked back". Lightning weaknesses included the poor armament of just two missiles (the MoD would not fund underwing Sidewinders, for example) and the low fuel capacity of 7,500lb (at low level in afterburner the fuel consumption was 1,300 lb/min.). In 74 Squadron at Leuchars Heinz flew the Mk6 with the ventral tank which improved things. From Coltishall Heinz moved to 5 Squadron at Binbrook. It was the height of the Cold War and there were always two aircraft on QRA (Quick Reaction Alert) to intercept Soviet Bears and Bison. Usually there was 20 minutes warning but on one occasion Heinz got from sleep to airborne in 3 mins 57 secs thanks to the gang bar for setting the cockpit switches and one push to start both engines. Whilst on the Mk6 Heinz reached an altitude of 74,000 ft, zooming from M 2.2 at 40,000 ft into ballistic flight.

At the Empire Test Pilots' School Heinz flew piston engines for the first time, in the STO Twin Pioneer, and reacquainted himself with the Hunter, flying an erect and inverted spinning programme. At the Fighter Test Squadron he converted to the Harrier doing CA Release work including guns air-air and rockets air-ground weapon aiming. He found the weapon aiming system to be not the best it being necessary to stabilise the sight for 1 - 2 seconds before aiming. It took him six sorties to hit a towed banner target whereas he had managed that on his first Lightning sortie.

The Jaguar was "a test pilot's delight - everything was wrong with it". It was vastly underpowered. "Q: Why did it have two engines? A: If you lost one the other was just powerful enough to get you to the crash site". The fuselage was soft; pull g and the rudder deflected; a 90 deg bank came after a 6g ground attack dive. Reheat and airbrake selection could both give a 2.5g pitch up. After a water soaking on the ground Heinz climbed to 36,000 ft where the ailerons became solid and unusable. However 1 degree of sideslip gave a roll rate of 60 deg/sec so Heinz flew back to Boscombe on rudder. On inspection it was found that the control run in the spine was frozen solid. Gun firing caused engine surge. In the case of engine failure one dry engine was not powerful enough for a circuit but with reheat it was too powerful, so it was necessary to switch reheat in and out - but lighting the reheat was unreliable. Stanley Hooker said that reheat was the work of the devil!

Next came the Phantom. Heinz read the Pilots' Notes over the weekend, climbed in on Monday with Tom Lecky-Thomson on the telebrief. Start-up was OK but he found he didn't know how to close the hood - must have missed that bit, so he asked Tom. His first take-off was in a clean aircraft with full reheat. The Phantom was a poor handling aircraft but with a very good undercarriage and a superb weapons system (4 missiles and 11,000 lbs of bombs); and a back seater to work the tremendous radar. Unfortunately Speys in the UK version required bigger intakes and bulky afterburners making the aircraft slower than the off-the-shelf US versions.

Heinz flew the Lightning again and did air-ground firing of the ventral tank mounted Aden guns. It was windy on Larkhill Range so the 30 ft square hessian targets could not be erected and had to be laid in the ground. He came in low in a 10 deg dive, fired and pulled up. It took 2 ½ second to reach 5.5g and Heinz mused to within 12 ft of the ground. Spinning on the Mk6, which had never been done before, was not bad. Initiated at 45,000 ft and 0.9M, stick hard back gave a spin similar to the Jet Provost with 2 ½ secs per turn and a positive recovery in 2 ½ turns, but 10,000 ft was needed for the pull-out.

Heinz did the cold weather trials on the Harrier at Cold Lake, Alberta, with temperatures down to -40 deg C. A problem was that when taxiing with nozzles deflected snow froze on the under-fuselage which prevented the undercarriage doors from opening. After flying a series of strenuous wind-up turns (WUT) on the first Harrier TMk2 at Boscombe some rivets in the tailplane needed replacing and Heinz observed that the tailplane moved when the rivet gun was applied. He judged that there was excessive play so requested a tailplanes change. Next day the foreman said, "come and look at this" and pointed out two cracks in the rear fuselage. On the next WUT the tail would probably have come off!

Sometimes Heinz flew the A&AEE's 'calibrated' Javelin, of which type he had a low opinion. It is said that a test pilot reported that "entry to the cockpit is difficult; I strongly suggest it is made impossible"!

Rolls-Royce at Filton needed a test pilot for engine work at Bristol and Heinz got the job so moved there and at a stroke doubled his salary. He flew many types including a Vulcan with an RB 199 under the fuselage, and a VC10 with an RB 211 on one side. He flew the RB211 relight programme in which the 211 was started by bleed from one of the Conways which reduced its thrust to 80%. So keeping the aircraft up on just two Conways at 80% and 100% thrust instead of four capable of 100% each was tricky. He also flew on the 211 bearing slip programme which called for 80 hours of flying at 10 - 12 hours per day.

On the Harrier he flew the manual fuel control system (MFCS) trial, it worked well but at high altitude the throttle was, naturally, very sensitive. Back in the Jaguar Heinz flew the part throttle reheat system allowing reheat to be used down to 80% rpm instead of only at 100%, which was needed by the reconnaissance pilots as the pod had a high drag. Another Jaguar Adour problem was that the engine had a habit of shedding carbon from its combustion chambers causing puffs of black smoke in the exhaust efflux. With a modification to stop the carbon build-up Heinz slammed the throttle closed and got an immediate flame-out. The red-hot carbon had been providing an automatic relight capability!

He also converted to helicopters for a Gnome programme, tested the Viper in the HS125, and the VFW-Fokker VF 614 with over-wing M45H engine pods. "Why over-wing? If they were underneath the wheels wouldn't reach the ground!". The advantage was that the flight test engineers could watch a surge from the windows. Heinz also flew the Hawk for Adour relight tests

The Concorde had a surge problem where an outboard engine would surge which would cause the inboard to surge so the aircraft would yaw causing the two engines on the other side to surge as well. The way the surge was observed was to film the unstable flame in the jet-pipe from a Gnat with a camera on its fin. When Heinz was flying the Gnat close behind and below he watched the Concorde wing flexing during a surge at 500 kn and 10,000 ft with the undercarriage doors open.

. In 1978 Roll-Royce decided for reasons of economy to carry out engine tests at the airframe manufacturers airfields and cut back their Filton operation so Heinz accepted John Farley's offer of a test pilot job at Dunsfold. His first flight at Dunsfold, because John was unwell, was a Sea Harrier demonstration for a visiting Chinese delegation. Unfortunately the navigation system platform tilted soon after take-off leaving Heinz lost. However, Dunsfold ATC steered him home. He flew the Sea Harrier at the Paris Air Show and Hawk Red Arrows smoke system development trials. Ground tests at Dunsfold were carried out at the eastern end of the airfield near John Yoxall's, the Works Manager's, cottage, pointing the Derv and Biro ink-laden exhaust into the bushes to stop it spreading. Unfortunately John Yoxall's cat used to hunt in these bushes and John was not at all please by the inky paw prints all over his sofas. It is necessary to keep the Adour RPM up for good smoke which is why the Red Arrows fly with the airbrake out at low speeds.

Heinz went to Edwards Air Force Base for AV-8B relight testing which was a great experience. Every flight had to be chased and often the chase pilot would not be at the briefing so didn't know what was going on. Also, the usual chase aircraft was a Phantom; if it had drop tanks it was too slow, if it didn't its duration was too short. At West Freugh in the Harrier GR5 Heinz dropped six 1,000 bombs, all within 10 metres of the target; high accuracy. During 25mm Aden gun air firing trials on the GR5 Heinz fired 20 rounds from the left gun and saw a group of black dots going past. Back on the ground damage was found on the left wing; the aircraft had flown through a cloud of 25mm projectiles - a narrow escape. The cause was rapid wear of the gun barrel rifling causing unstable projectile flight; they 'stood up' and slowed down.

On a GR3 flight on New Year's Eve, to ensure payment that year, the engine surged at 35,000 ft and would not relight without surging. All diversions were closed so Heinz had no option but to glide to Boscombe Down for a forced landing. The place was deserted so he climbed out down the wing and walked to a police box. The policeman reported to his superior, "There's a bloke here dressed as a pilot. I've told him the fancy dress party isn't 'til this evening".

Interesting sidelights were demonstrating the GR5 at Paris and overseas delivery flights. At Jamnagar the runway couldn't be found - it was camouflaged - and it was covered in vultures. Time-to-height records were set at Filton with an uprated Pegasus 11-61 powered GR5 with Chris Roberts and R-R test pilot Andy Sefton. Post flight the engine was run on the test bed only to suffer an oil gallery failure leading to a seized engine; all this just two minutes running time from post-flight shut down. Trials to show the feasibility of Heinz's invention, the 'Skyhook', were flown at Dunsfold using G-VTOL. Regrettably it wasn't taken up. The idea allowed the weight of a Sea Harrier to be reduced by 1,500 lb (no undercarriage needed) to 11,000 lb empty, so with the 23,500 lb thrust Pegasus 11-61 capability off the Skyhook would have been very good.

In 1990, aged 50, Heinz had to retire from fast jet flying and got a job with Air Europe as a First Officer but after becoming a Captain after a year's training the firm went bust. Next Heinz flew an executive jet throughout Europe and the Middle East for a Yemen-based businessman and finally as a professional, flew an Air Ambulance returning patients to the UK. After a flirtation with a scale Hawker Fury biplane, which he helped finish and test flew from Dunsfold - the last test flight from there - he settled for a share in a glider in which he has so far achieved a 3 ½ hour flight.

This concluded a wonderfully evocative and entertaining talk by an aviator who had had a number of 'lucky escapes', but as Chris Roberts said when giving the vote of thanks, the more skilled you get, the luckier you are.

MEMORIES OF A HAWKER APPRENTICE

Doug Shorey concludes his story.

PART 3 LIFE AFTER APPRENTICESHIP

After my apprenticeship finished in October 1961 I continued with my academic studies by doing a two year Higher National Course (HNC) on a three evening/week basis. This was important because I still hoped to gain Chartered Engineer status and I needed HNC as one of the qualifying steps in securing my Corporate Membership.

I would often have conversations with Tommy Wake about his career at Hawkers, to further my interest and knowledge in the various developments in military aviation up to the 1960s. By the time we reached 1962 Tommy told me that he knew of a post which had become available for a Detail Draughtsman in the Research and Development Department. This department was run by Charles Plantin and although I had never spoken to him I certainly knew who he was. I told Tommy I would love to be considered for the post and a few days later I was interviewed by Charles Plantin. Charles acquainted me with the work undertaken by his department and I was fired with enthusiasm listening to what he had to say. The outcome was that Charles offered me the job and a couple of weeks later I joined his department.

Always impeccably dressed, Charles was a tall elegant man who, to me, was a true gentleman (to coin a rather old fashioned word). He never forgot to ask me how I was getting on from time to time and I was always addressed by him as 'Shorey'. To me, he was always 'Mr Plantin' and I would never dare to have called him 'Charles' to his face! Clearly Charles was an erudite and competent engineer but unfortunately I was never able to develop the rapport with him that I had enjoyed with Tommy Wake. This is why I found David Hassard's recent and excellent presentation of Charles's career and private life to be so interesting and informative.

On my first day in R&D I was introduced to Diggy Mottram and he was to become my mentor for the next couple of years. Diggy then passed me over to Denis Logan who was a senior and very experienced Design Engineer. It transpired that my role was to work closely with Denis doing the stress calculations and detail drawing work for manufacture of the various components making up 'Wiffle Tree' linkages, to test load airframe structures.

At the end of my first day in the department I had very mixed feelings over what I had let myself in for. On the one hand I was keen to get stuck in but at the same time I wondered how I would ever get to grips with the tasks I was expected to undertake and master. However my apprehensions were completely unfounded as I was in very good hands. I found both Denis Logan and Diggy Mottram to be two of the most patient and knowledgeable people I could have ever worked with and for.

It was whilst working in the R&D Department that I learned Tommy Wake was to retire after spending 40 plus years of service with the company. On his last day in the office I told Tommy that I envied his career because he had seen so much change and technological advancement during his time. He responded by saying he had been fortunate and with the uncertain times being faced in the early 1960s he wondered if we as a nation would have much of an aircraft industry left by the time I reached his age. How true that prophecy proved to be. I am now older than Tommy was when he retired and sadly all we left have today are a few remnants of our once great industry.

As we moved through 1963 I began to wonder whether I would have a long term future working on military aircraft. The Labour Party were promising to scrap most military aviation projects on the drawing board and that is exactly what they did when they eventually came to power in early 1964. Out went the TSR2 and the P1154, amongst others. The P1154 was, of course, to have been Hawker's supersonic successor to the P1127. In fact looking back, it seems hard to believe that 50 years have passed since the Harrier as we now know it, first took to the skies.

I was due to be married in September 1964 and I recognised that, at age 23, my aeronautical experience was still extremely limited. If cut-backs were to be made, I felt my long term future at Hawkers would be very uncertain. I therefore made the decision to look for alternative employment; a decision I did not make lightly. However, within a year or so cutbacks were made at Kingston which helped me to justify the action I had taken.

PART 4 LIFE AFTER HAWKERS

After resigning from Hawker I joined Elliott Automation as a Mechanical Design Draughtsman. I was attached to the Inertial Navigation Team which was responsible for developing on-board navigation systems for commercial airliners. Inertial navigation was particularly useful when flying over large expanses of water such as the Pacific and Atlantic Oceans, and Elliotts had a lot of interest being shown by quite a few airlines. I found the work to be very interesting but I was to encounter a major snag. Unfortunately, there was insufficient mechanical work to keep me occupied on a full time basis and I was often switched to working on the design of printed circuit boards. Regrettably PC board design was definitely not my cup of tea and after a couple of years with Elliotts I began to look around for other opportunities.

After a while I came across a small engineering company, employing only 35 people, which specialised in the design and manufacture of vibratory materials handling equipment. Although they were very successful in what they did they had experienced a number of structural failures due to metal fatigue. They were therefore looking for someone who had some experience of calculating the stresses being imposed on the structures to avoid future failures. My Hawker R& D experience had given me the level of know-how the company was seeking and I secured the post of Design Engineer. All the equipment was custom designed and manufactured to suit the applications and before long I was carrying out on-site surveys to determine space availability to accommodate the equipment. This led me onto carrying out costings for manufacture and installation and also writing up the proposals. Eventually I progressed to selling the equipment which was a role I particularly enjoyed. I was with this company for only seven years but it was to set the scene for the future.

I remained in the materials handling industry for the rest of my working life and I made steady progress in gaining seniority as I grew older. The last 22 years of my working life were spent with a large multi-national organisation where I was a Sales Project Manager. In this post I was responsible for the design and sales of multi-million pound bespoke automated materials handling systems to many well known companies across the UK and Europe. I headed a team of specialist engineers and technicians and it was my trust in their experience and abilities to get things right which gave me the confidence to sell the systems to the clients.

REFLECTIONS

Looking back on my career raises the question of whether I would do the same again, were it possible to re-live my life. My answer to that question would be yes, most definitely.

Although my time at Hawker had its problems - for example, how to survive on the low apprenticeship wages I received - these situations pale into insignificance when all the benefits and the happy times are taken into account. Above all, the basic training I received at Hawker was second to none in my view. Indeed, it proved to be the rock solid foundation which was to set me up for the rest of my working life.

I had partly achieved one of my initial objectives by working on airframe structures although by the time I resigned I was not sufficiently qualified to gain Chartered Engineer status. However I continued with my studies and I did eventually become a Chartered Engineer in 1969. This was with the Institute of Mechanical Engineers, however, and not the Royal Aeronautical Society.

Throughout my time at Kingston I was extremely lucky to have worked with so many clever and talented people. Indeed it was their collective patience and understanding in teaching me my craft which helped to formulate the way in which I was to develop my career. I had joined Hawkers as a fresh-faced lad in 1957 and I remained with them until late 1964. Forty six years later I still remember my time at Kingston with considerable fondness and affection. There is no doubt in my mind that Hawker was a superb company to work for and I am so thankful to have been a small part of it.

RAMBLINGS OF AN EX HAWKER AIRCRAFT APPRENTICE

Peter Ryans continues his story....

PART 2 - RAF AND MOD

My next involvement with company products was when I was at RAF Leuchars in 1957 when I used a Fowler steam plough with a cable and drum under the boiler to drag a Hunter out of the estuary of the River Eden. It had an engine failure just after take off from the "short" runway. We also had a Hunter flying around the airfield one day with its jet pipe sticking out of the rear fuselage when the attachment to the rear of the engine had failed or not been connected properly!

Next came a spell at RAF Colerne where amongst other duties I looked after two squadrons of Sapphire engined Hunters which one day were flown in as surplus to requirements. I was then told to dismantle and put them on the dump for sale as scrap. We had got through the first two or three when I had a visit from a familiar face from Kingston. It was an inspector by the name of Kemp who wanted to buy them back for the company for refurbishment and conversion to the Avon variants. They were all retrieved, including the dismantled ones we had put on the scrap dump, but when the final tally was made there was one short. I had earlier "given" one away without telling anyone and taken it on two 60 ft long loaders to a friend at RAF Gaydon for fire practice by the RAF fire crews there. Can't say it was not put to good use.

After a three year tour on a Canberra squadron in Singapore I was sent to Vickers Armstrong at Weybridge on the TSR2. This involved frequent visits to English Electric at Warton and to Bristol to cover the Olympus engines and then Boscombe Down for the flight trials. I spent the final two years on this project in the London Project Office until the aircraft was cancelled in 1966.

I was next employed in London in the P1127 project office where I had the task of dividing up the assets of the West Raynham P1127 Tripartite Squadron post disbandment, between the UK, FRG and the US - no mean task on occasions due to entrenched national interests. Following yet another review of UK defence requirements, including cancellation of P1154, we were then tasked with compiling a specification based on the P1127 to meet the Air Ministry operational requirement and hence the Harrier was born.

The UK had by this time decided to procure the Phantom for both the RN and RAF and I was attached to the United States Navy (USN) at Naval Air Station North Island, San Diego California. The purpose of this posting, which lasted nearly three years, was to gain experience on the Phantom and to see how the USN supported Phantom operations. This was a particularly interesting period since it was in the middle of the Vietnam war and North Island was the main west coast port for the carrier force and all their aircraft repairs were undertaken here.

Following a spell at Staff College I was sent to RAF Aldergrove in NI where we were receiving the Phantoms as they were delivered from St Louis via the Azores. There was a considerable amount of modification to be performed on each aircraft before they were test flown and delivered to the RAF Germany squadrons, Leuchars, Coningsby and RN 892 Squadron. At one time we had nearly 100 Phantoms accommodated in hangars no more than twenty miles from Belfast. This was 1969-1971 when things were quite hot out there.

Further acquaintance with RAF Leuchars followed where I was station engineer for two squadrons of Lightning Mk6s, a flight of Lightning Mk1As, a squadron of Phantoms and a flight of Whirlwinds in the SAR role. Latterly we were also home for the disembarked RN Phantoms. Leuchars was a master diversion airfield and provided 24 hour Quick Reaction Alert (QRA) cover for encroaching Russian aircraft probing our airspace. At that time it was a very busy airfield since it was at the height of the Cold War.

Headquarters Strike Command was my next appointment where I was the RAF Engineering Authority for operational Phantom, Lightning and Harrier aircraft. This of course necessitated visits to Brough for Phantom fatigue issues and to Richmond Road where I found the front of the factory, as I had known it, covered by an office block. I particularly remember the rather lavish lunches which were provided during these visits.

This appointment was followed by a tour in the MoD where I had the engineering project office for the Hawk, Sea King Mk3, Chinook and the NATO AEW project. Apart from visits to the US, Brussels and Yeovil I spent quite a time at Richmond Road, with the Gordons Hudson and Hodson, and at Dunsfold. My Hawk involvement culminated in the Maintainability and Reliability incentive aspects of the Hawk contract. These timed trials, held at Dunsfold, included component replacement on the flight line followed by flight and turn rounds. The company passed with flying colours and gained the maximum incentive bonus provided by the contract. We then had to explain to the MoD bean counters why we had made it so easy!

Following attendance at the Air Warfare College I had an appointment covering engineering aspects for fixed and rotary wing aircraft at all training airfields, which at that time were operating the Hawk, Jetstream, Bulldog, Dominie and Gazelle. My final engineering appointment in the RAF covered all third line aircraft engineering activities at Abingdon (Jaguar), Kemble (Hawk - Red Arrows), St Athan (Harrier, Phantom, Victor) and the Adour engine and Cardington (gases). I then decided to take early retirement from the RAF and joined Ferranti Defence Systems in Edinburgh in 1984. (To be continued).

MEMBERSHIP NEWS

Sadly we record the deaths of Arthur Sharpe, Patrick Webb and Bryan West and send our sympathy and condolences to their relatives and friends. Although he was not a Member, but as many Members will have known him, we also note that Eric (Tug) Wilson, RTO at King, and Richard Townsend.

MEMBERSHIP LIST JANUARY 2014.

There are still many unpaid subscriptions for 2013. Please refer to the last Newsletter, No 37, if you have not paid since then. Please send cheques payable to The Hawker Association to Barry Pegram, 12 Becket Wood, Newdigate, Surrey, RH5 5AQ. If you are **leaving** please let him know by post or by telephone on 01306 631125. Thank you.

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